Modification of Lipoprotein in Acute Falciparum Malaria Infection.

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The host response to an acute infection could induce oxidation and change in plasma lipid. The products of lipid peroxidation could in turn modulate host response processes. The present work was aimed to study the effect of acute infection with falciparum malaria on the plasma lipid. Plasma lipoproteins were isolated and determined in the patients with acute falciparum malaria (13 cases) and in 12 healthy individuals. The levels of cholesterol, protein and phospholipid in low density lipoprotein (LDL) and high density lipoprotein (HDL) were lower in the patients than in the controls. The levels of TBARs (the end-products of lipid peroxidation) were significantly higher in LDL and HDL from malaria patients than the controls. The fluidity of LDL measured by the steady-state fluorescence anisotropy using 1,6-diphenyl-1,3,5-hexatriene (DPH) was inereased, and correlated with the levels of TBARs. These results could imply the association of oxidative modification of lipoproteins with the altered lipid pattern during acute malaria infection. The role of oxidized lipoprotein in pathogenesis of malaria remains to be investigated.